New fused thieno:imidazole derivs. as angiotensin II antagonists - for treating hypertonia, coronary insufficiency, angina pectoris anarteriosclerosis

Patent Number: DE4032522
Publication date: 1992-04-16
Inventor(s): KUHNKE JOACHIM DR (DE); SCHOELLKOPF KLAUS DR (DE); BECKMANN ROLF DR (DE); GRAF HERMANN DR (DE)
Applicant(s): SCHERING AG (DE)
Requested Patent: DE4032522
Application Number: DE19904032522 19901011
Priority Number (s): DE19904032522 19901011
IPC Classification: A61K31/415; C07D495/04
EC Classification: C07D495/04
Equivalents:

Abstract

Thienoimidazole derivs. of formula (I) and their acid and base addn. salts are new. In (I) A is a gp. of formula (a), (b) or (c). In (a)-(c) R1 is H, 1-8C alkyl, 3-6C alkenyl, 3-6C alkynyl (these last 3 gps. opt. substd. with a halogen or OR5 gp. or with one or two CO2R5 gps.), 3-6C cycloalkyl, 1-4C perfluoroalkyl, di(1-4C) alkylamino, or benzyl; R2 = a gp. of formula (d)-(k); B is formula (III). B = -(CH2)M-, CR16R17, -CR16R17CH2-, -CH2CR16R17-, or C=CR18R19; R3 and R4 = each H, F, Cl, Br 1-6C alkyl, 2-6C alkenyl, 2-6C alkynyl, 1-6C perfluoroalkyl, 3-6C cycloalkyl, 1-4C alkoxy or CN, C6F5 etc. R7 = 1-4C alkyl or benzyl; R8 and R9 = each H, 1-4C alkyl, Ph, benzyl or together with an N form a ring of formula (i). R10 = H, 1-4C alkyl, benzyl or 1-6C alkanoyl. R13 = CO2R5, NHSO2R2O, R14 and R15 are each H, F, Cl, Br, CN, OR5, 1-4C alkyl, 2-4C alkenyl, 2-4C alkynyl, NO2, NH2, 1-4C alkylamino, di(1-4C alkyl) amino, 1-4C alkanoyl, R16 and R17 = each H, 1-4C alkyl, 3-4C alkenyl, 3-4C alkynyl or -CH2-CH"-; R18 and R19 = each H, 1-4C alkyl or -CH2)r- R20 = 1-6C alkyl or 1-6C perfluoroalkyl; T = -CH2-, -O- or -NR10-; P = 3-4; and r = 4-5.
USE/ADVANTAGE - (I) are competitive angiotensin (II) antagonists which bond to angiotensin II receptors with high affinity and inhibit angiotensin II induced effects both in vivo and in vitro. (I) can be used in the treatment of eg. hypertonia. cardiac insufficiency, angina pectoris and antericosclerosis. Suitable doses are 0.01-50 mg/kg.